

## **Advanced Materials for Clean Energy & Health Applications (AMCEHA)**

held at the University of Jaffna from 6<sup>th</sup> to 8<sup>th</sup> of February 2019

An international conference on Advanced Materials for Clean Energy & Health Applications (AMCEHA 2019) was organized jointly by University of Jaffna (UoJ) and Western Norway University of Applied Sciences (HVL) from 6th to 8th of February 2019. Over 400 delegates, including 120 foreign delegates from more than twelve countries such as Norway, India, Canada, Australia, UK, Bangladesh, Sudan, Sweden, Finland, Egypt, China, Japan and USA participated at this unique conference. Over 180 research articles were submitted and up to 140 research articles have been selected and presented after peer-review process. The experts have praised the quality of the conference proceedings edited by Mr. Suthakar. Selected quality papers will be published as full-scaled articles in 'Science Citation Indexed' journals in the coming weeks after another set of peer-review process by the respective publishers.

The participants at AMCEHA 2019 comprised of experts, eminent scientists, industrial representatives from local & foreign companies and students of higher learning in Clean energy technologies and Health applications. The conference was organized under the two collaborative projects (<http://project.jfn.ac.lk/hrncet/>) between UoJ and HVL: Higher Education and Research collaboration on Nanomaterials for clean Energy Technologies (HRNCET) and Capacity Building and Establishment of a research Consortium (CBERC) funded by Center for Norwegian Centre for International Cooperation in Education (SIU) and Royal Norwegian Embassy in Sri Lanka, respectively. The conference and the workshop were co-chaired by Professor Dhayalan Velauthapillai from Western Norway University of Applied Sciences and Professor P. Ravirajan of the Department of Physics, University of Jaffna. The first two days of the conference were held at Main premises of the University of Jaffa in Thirunelvely and the third day at the Faculty of Engineering in Kilinochchi premises.

Inauguration ceremony was commenced after procession of invited speakers and guest, lighting of oil lamp and welcome song and dance performed by the students from Ramanathan Academy of Fine Arts of the university. His Excellency Thorbjørn Gaustadsæter, Ambassador at The Royal Norwegian Embassy in Colombo was the chief guest and Prof. P.S.M. Gunaratne, Head, Research and International Cooperation & Vice Chairman, University Grants Commission, Sri Lanka was the Guest of Honour Prof.R.Vigneswaran, Vice Chancellor, Prof.G.Mikunthan, Dean/Graduate Studies at University of Jaffna, Rector Berit Rokne and Henning Norheim, director at HVL welcomed the gathering. Apart from the scientific activities, the conference also provided opportunities for signing MoUs and agreements for collaboration and co-operation in higher education and research between University of Jaffna and GEXCON: a world-renowned company in safety measures (<https://www.gexcon.com/news/Gexcon-signed-MoU-with-University-of-Jaffna/230/en>) as well as HVL and NIFS, Sri Lanka.

On behalf of the University Council, the vice-chancellor of the University of Jaffna appreciated Professor Dhayalan Velauthapillai with a memento for his tireless efforts in wining and executing two major projects worth of over LKR 200 million to promote Higher Education and Research Collaboration at the university of Jaffna and Western Norway University of Applied Sciences through students - staff mobility programmes, conducting international conferences, outreach activities in schools and developing Master degree programmes, since the signing of the MOU with the Western Norway University of Applied Sciences in March 2017 (<http://www.jfn.ac.lk/index.php/mou-norpart/>).

After the inauguration ceremony, four plenary talks were delivered by eminent scientists in the fields of nanomaterials for solar cells, health applications and energy storage systems. An interactive poster session was followed by one-minute spotlight presentation of each poster. Up to thirty posters were displayed by the authors after the spotlight session.

The second day of the conference (<http://conf.jfn.ac.lk/amceha/index.php/programme/>) was organized under four different symposiums with themes Solar energy applications; Advanced Materials for Health Applications;

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Advanced functional materials; and Wind/Hydrogen/Bioenergy and Storage applications. Each symposium had four plenary and invited lectures and more than 30 contributed papers. On the second day of the conference, a considerable number of dentists and the students from the medical faculty attended the session led by world renowned Scandinavian scientists in regenerative medicine.

Sri Lankan and Norwegian workshop on Clean Energy Applications was held at the Faculty of Engineering, Kilinochchi as the third day of the conference which was co-chaired by Professor Dhayalan Velauthapillai from Western Norway University of Applied Sciences and Professor A.Atputharajah, Dean/Engineering. It was attended by most of the participants of the conference, other industrialists, policy makers from the government sector, investors and representatives from clean energy enterprises in Sri Lanka. In order to realize new innovations, researchers need the active support of the industry. Especially in the clean energy sector, the industrial involvement will help us in implementing new innovative clean energy technological solutions. Thus, on Friday, in collaboration with Sustainable Energy Authority in Sri Lanka, multiple sessions were arranged to discuss on the challenges and possibilities in implementing clean energy solutions in Sri Lanka. The first part was to look back at the Clean Energy Seminar held in Colombo in May 2018 and identify the progress made in different aspects of clean energy technologies and to discuss the way forward in the future. Local and Norwegian clean energy companies presented their activities. An interactive session was also arranged to discuss the possibilities in enhancing collaboration in higher education in the field of clean energy technologies between Sri Lankan, Norwegian and Indian Universities. Expatriates from various countries presented their ideas on how the expatriate community contribute in capacity building at University of Jaffna.

This international conference is considered as an historical event of the university of Jaffna with more than 120 foreign participants, and students, academics, officials and all the national and international delegates had praised the conference as one of the best conferences they have attended. The conference is characterized as of high quality and well organized. AMCEHA 2019 has contributed to wide recognition of University of Jaffna as a research institution; the academic personal has broadened their research network and the students have got international exposure and are really inspired by high quality research presentations. In addition, the participants at the conference had also an opportunity to enjoy the hospitality of the people in the region.


*Organising committee of AMCEHA – 2019, acknowledge Royal Norwegian Embassy in Colombo, Norwegian Centre for International Cooperation in Education (SIU), Norwegian Research Council, Sri Lanka Sustainable Energy Authority and Ministry of Science, Technology and Research for their generous financial support.*

**Prof.Dhayalan Vellauthapillai and Prof.Punniamoorthy Ravirajan**  
Conference Co-Chairs/AMCEHA 2019 and Coordinators/HRNCET project  
About the projects <https://youtu.be/Do9R71dV7Q>




University of Jaffna  
Sri Lanka

*International Conference on*  
**Advanced Materials for Clean Energy and Health Applications**  
February 6-8, 2019  
**(AMCEHA 2019)**



Western Norway  
University of Applied Sciences



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**Day 1 & 2 (06 & 07.02.2019, Wednesday):** Inauguration, plenary and poster session  
At Kailasapathy Auditorium and Library Auditorium, University of Jaffna, Thirunelveli

At the entrance





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**Day 3 (08.02.2019, Friday):** Workshop and discussion on private- public partnership on CETs  
At the Engineering faculty, Ariviyal Nagar, Kilinochchi

